Jan 12th 1829 No 13 G.

35 North 10 above vine Ad Lund. of Harvard

A Treatise

Passed March 3d

on

Spina Bifida

With two cases of its treatment

By

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Litchfield. (Conn)

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The student of medicine, cannot be supposed a person of enlarged experience; his knowledge is purely elementary, & derived either from instructors, or from books. Hence in that sine qua non a thesis, he must come forth literally the trumpeter of the thoughts & acts of others. And here his situation is peculiarly hard. The quotation of learned lore is profitless; the treatment of diseases, has been touched & retouched by various authors, with a similarity so exact, that we can safely say of them, "O imitatory servile pens!" Theory & speculation alone remain to throw light over subjects hitherto involved in darkness, or cast a deeper shade over existing uncertainties. But theories like bubbles rise & burst. They are for the most part mere floating visions of the imagination, — And what communion has this with medicine? Can it assist the chemist as he holds the crucible, — the botanist as he examines the characters of plants — the physician & surgeon as they feel the throbbing pulse, or check the streaming blood, — or the anatomist as he lifts the dissecting knife, & exposes to his enquiring gaze the lifeless remains that lie outstretched before him? No, these are things tangible & realities. Experiment & observation, a discriminating mind, a sound judgment, an acute perception, & the entire use of all the senses constitute the perfection of our art —

What has given the name of Physick, the exalted rank it holds in the profession? It is the use of the qualities I have mentioned, the improvements he has introduced & the mass of facts he has contributed. Who would relinquish his eminence for that of the mere theorist? If a great man is not an anomaly in nature such an one deserves the title. Thus those master-spirits that are scattered over centuries, "rari nantes in gurgite vasto," acquired renown, & thus in our profession will it be sought by all aspirants after fame

Convinced then of my inability to add any thing to the subjects discussed in course by the several professors, & of the futility of theorizing aside from practical illustration, I have left the common routine, & chosen one of the opprobria (viz.) Spina Bifida. Two cases of its successful treatment have fallen under my observation, & as the practice was in some respects new & peculiar, the relation of them will not perhaps be unprofitable. It may first however be proper, to give a general description of the disease as described by authors

Spina Bifida (bis & fido) derives its name from the two-fold passage often found in the spine, the usual channel for the spinal marrow & the unnatural fissure, from which issues a tumour filled with a

fluid that constitutes the disease. It is congenital, or appears very soon after birth, occupying different positions upon the spinal column from the cervix to the extremity of the sacrum. The size & shape also vary upon different patients. Cases are recorded where the tumor was no bigger than a walnut, & others again where it reached the magnitude of a child's head. In one instance it is said to have formed a ridge parallel with the spine for its whole length. Sometimes it presents a flattened surface, but little elevated, & at others it forms a very considerable protuberance, with the greatest diameter at the outer extremity, & the smallest at its attachment to the spine. The swelling, whatever its situation & dimensions may be contains a fluid that is generally transparent, resembling serum. Though from the analysis of Dr Marcet its specific gravity is 22.5 less than the specific gravity of serum. It however agrees very nearly with the fluid that lubricates the ventricles of the brain, showing pretty conclusively that both proceed from an identity of structure.

This fluid, upon puncturing the tumor, has been seen tinged with blood. This appearance was probably derived from ~~an~~ infiltration of blood into the surrounding cellular tissue, which would easily upon opening be

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come miscible with the more diluted & colourless fluid, that occupied the cavity of the tumor. A fluctuation is always perceptible upon pressure, - the integuments are much distended, & at some points thinned so much as clearly to show what is contained within. If the enlargement is constant from birth, or from the time of its first appearance as usually is the case, it bursts spontaneously, & soon proves fatal.

Paralysis of the lower extremities, involuntary discharges, &c are said to be occasionally the concomitants of this disease. This can readily be accounted for from the fact, that in all cases of Bifid Spine there is a deficiency of bone where the swelling protrudes - the spinous processes are entirely wanting or there is a partial formation & the tumor arises between the bones. The spinal marrow then is destitute of its usual protection, & is made to sustain the weight of an accumulating fluid, pressed strongly by the resistance of the external integuments, & the membranous sheath that lines the sac internally. As a consequence the action of the internal fasciculi of fibres is suspended - the nerves, given off below the swelling, are shut out from effectual communication with the brain, & from the point where this

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temper an unavoidable & marvellous distance. These [illegible]
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[illegible] in which the disease [illegible] was induced; [illegible] into view the tender age of the patient & [illegible] [illegible] was his [illegible] more [illegible] attended [illegible] the constitution [illegible]. His second mode [illegible]

[illegible] one through [illegible] [illegible] [illegible] [illegible] the [illegible] [illegible] the [illegible] [illegible] indeed [illegible] of the [illegible]

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[illegible] In a short time the melting intensity must [illegible] be [illegible]

[illegible] further preliminary remark, I shall [illegible]

[illegible]

physicians had already pronounced the disease Spina Bifida incurable. Dr A. advised the recumbent posture, the Tinct. Iodine & an adhesive plaster to cover all the lumbar, dorsal & two of the cervical vertebræ. The child was accordingly placed upon a pillow & for five weeks was not raised to a perpendicular position. More than ⅔ of this time it lay upon its back. The tincture of Iodine was given to such an extent as the stomach would bear without inconvenience, & new plaster was applied every 8th or 10th day, at the end of the time above specified the tumors had entirely disappeared, & nothing unusual could be discovered upon the back. As this was confessedly an experiment – no hopes of recovery were entertained more particular minutes of the progress of the case are neglected.

Jan. 1829. The child is stout & healthy & possesses as much life, liveliness & activity as most children of its age. For greater security the treatment was continued for some time after the tumors disappeared, but at length it was suspended, & there has been no necessity for its renewal.

The second case in which Dr A. was consulted, was a child of D. W.

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I cannot see the expectation [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] result.

When [illegible] [illegible] dif- [illegible] in some respects from any proper [illegible] [illegible] seemed a proper case for the palliative [illegible] [illegible] (But [illegible] the pressure with the bellows [illegible] [illegible] that the recumbent posture [illegible] long continued, together with adhesive strapping [illegible] [illegible] so [illegible] [illegible] [illegible] these [illegible] since he was induced to bring in the [illegible] [illegible] the iodine, not only from the success which [illegible] [illegible] mention [illegible] [illegible] cases [illegible] scrofula, [illegible] [illegible] but also from the good effects of its use in [illegible] [illegible] This medicine [illegible] increases vascular action & excitement, & creates an irritability of the lining membrane of the absorbents causing them

[illegible] was not merely carried inward upon the spinal column, but was moved to the cervical region. The result, [illegible] the case in [illegible] tion followed to effect a radical c[illegible]

In the second case, the same measures, it is believed exe[illegible] no inconsiderable effect, not only as a part of the curative plan but as tending to prevent a recurrence. But the most remarkable feature in the treatment of this case was the [illegible] seemed the only course that promised the least hope of [illegible] of the proposal as I have said rests with Mr. W. D. Dell, - but so far as I know this is the first case of its trial, & certainly no small share of credit is due to Dr. [illegible] for [illegible] to the tested experiment. [illegible] Rev. There is one glory in devising another in execu[illegible] reviving what is forgotten or obsolete, & [illegible] as [illegible] or discovery. (Chapman)

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Under a judicious management then the application of the ligature in particular cases especially where the tumor is attached by a pedicle is superior to every other mode of treatment. By carefully removing all sources of irritation, & pursuing at the same time a well regulated course of general treatment in accordance with sound rules of practice, I have no doubt a speedy cure might often be effected, where now no consolation is offered to the parents or assistance to the child.

When called to cases of this sort I grant the surgeon is delicately situated. The cases of cure are extremely small; & few have the boldness to undertake what has been so rarely accomplished. He recollects that among people ignorant of the profession, the reputation of a surgeon may be unjustly ruined. If he abandon the child to its fate, as is too often done, censure may be avoided; yet if it die under treatment — & the chances are manifold that it will — even should its doom be hastened scarcely a single hour, his character may receive irreparable injury. But at such a time timidity & rashness are alike culpable: the doubtful remedy is all —

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ways better than none, & it is never proper to shrink from the performance of duty. Life is desirable under almost any circumstances. The instinctive love of life gave birth & support to medicine, & will give it perpetuity. The practitioner then should spare no efforts for its preservation till all hope is utterly extinguished. Viewing medicine as a beautiful system of inductive philosophy, let him proceed to the application of remedies, & not be daunted although some diseases are still regarded as opprobria. By practical deductions from general principles, & the application of new remedies or modes of treatment they may possibly be overcome; — and it is no common merit to have rescued a single individual from an untimely end —